HONG KONG

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REPORT

OF THE

BOTANICAL AND FORESTRY DEPARTMENT

FOR THE YEAR

1934

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REPORT ON THE BOTANICAL AND FORESTRY DEPARTMENT FOR THE YEAR 1934.

General.

The weather, during the first six and the last three months of the year, was favourable to both gardening and forestry operations; during the third quarter garden operations were much delayed and large numbers of winter seedlings were destroyed by heavy rains.

2. The rainfall recorded by the gauge in the New Garden was 97.39 inches in 132 days as against 73.50 inches in 134 days in the preceding year.

3. Frost was recorded in the Fan Ling district of the New Territories on the night of the 7th-8th of December; of the field crops the following were badly damaged or killed:—Sweet Potato, Banana, Hemp, Tomato, Bean and Pineapple; in flower gardens Dahlia and Canna suffered damage to foliage.

4. Typhoon signals were hoisted on five occasions during the year; no damage was done by either of the gales which approached the Colony.

Gardens, Parks and Grounds.

5. *Botanic Gardens.*—The Gallery Walk, which gives access to the New Garden from Glenealy, was reconstructed by the Public Works Department and opened to the public during the year; this walk has been closed since 1923, in which year a portion of it was carried away by a landslide between Robinson Road and Glenealy; it is interesting to note that this landslide took place some forty minutes after the great earthquake in Japan on September 1st, 1923.

6. Two very large specimens of *Aleurites triloba*, Forst. at the Albany entrance to the Old Garden were felled; the trunks were preserved to a height of six feet and were covered with the Spider Orchid, *Renanthera coccinea*, Lour.; this work, combined with returfing, has very much improved the appearance of this section of the garden.

7. The total number of trees, shrubs and pot plants sold during the year was 1,828.

8. *Government Bungalow, Fan Ling.*—The grounds were taken over by the Department in April. A total area of 14,815 square yards was turfed; flowering trees, shrubs and creepers to the number of 2,110 were planted. An avenue of trees, made up of *Poinciana regia*, Boj., *Crataeva religiosa*, Forst. and *Bauhinia Blakeana*, Dunn, was planted on either side of the approach road. Flower beds were formed and planted in suitable parts of the grounds.

9. *Colonial Cemetery.*—Twenty *Phœnix Rœbelinii*, O'Brien, were added to the avenue of this palm on the turfed area immediately inside the main entrance; groups of *Thuya orientalis*, Linn. were planted in vacant spaces in various parts of the cemetery.

10. *Kowloon Hospital Grounds.*—The ground in the vicinity of the new Medical Officer's Quarters was planted with groups of *Casuarina equisetifolia*, Linn. and *Pinus Massoniana*, Lambert.

11. *Government House; Mountain Lodge; Colonial Secretary's Residence; The Eyrie; Homestead Quarters; Government Pavilions and Villas; Victoria Hospital; Statue Square Plots; Cenotaph Plots; Government Offices; Defence Corps Headquarters; West End Park; Civil Hospital; Mental Hospital; Leighton Hill Quarters; Indian School; Royal Observatory; Kowloon Magistracy* and *King's Park.* Grounds of all the places mentioned, which are under the control of this Department, were kept in good order generally. Stocks of pot plants were maintained, planting of additional trees and shrubs was carried out on newly formed areas; trees, shrubs, flower beds, grass banks and lawns were given such attention as they required and undesirable undergrowth was regularly cleared.

Herbarium and Library.

12. During the year 464 plant specimens were received and 392 despatched. Plant specimens of botanical interest or economic value were identified for local collectors and institutions outside the Colony. The catalogue dealing with the general collection of plant specimens was revised. The whole of the library was rearranged in geographical order; additions were 24 new books and 722 bulletins and other publications. A new catalogue is now in course of preparation.

Forestry.

13. *Formation of Pine Tree Plantations.* The extension of old, and formation of new, plantations was carried out by the sowing *in situ* and the broadcast methods of seeds of *Pinus*

Massoniana, Lambert, both on the Island and in the New Territories. Sowings *in situ* totalled 232,488; areas so planted were Mount Collinson, Stanley Catchment, Shek O, Pokfulum Valley, Kowloon Reservoir, Taipo Kau Forestry Reserve and hills to the east of Customs Pass.

14. Sowings by the broadcast method were carried out on very extensive new grassy areas; cleared areas where trees had been destroyed by fire during the previous year were similarly dealt with. The total weight of seeds used was 2,931 pounds.

15. *Pine Seed Collection.*—Cones were collected from the plantations at Fan Ling, Kowloon Tsai and Kowloon City, the total weight of seeds extracted up to the end of the year was 300 pounds.

16. *Broad-leaved Trees Planted.*—The following trees were used in the formation of plantations of varying sizes and the extension and maintenance of the road planting scheme:—*Albizzia Lebbek*, Benth., *Tristania conferta*, Griff., *Melia Azederach*, Linn., *Aleurites Fordii*, Hemsl., *Aleurites triloba*, Forst., *Aleurites montana*, Wils., *Cinnamomum Camphora*, Nees, *Acacia confusa*, Merr., *Acacia pennata*, Willd., *Artocarpus hypargyraea*, Hance, *Bauhinia variegata*, Linn., *Bauhinia Blakeana*, Dunn, *Cunninghamia sinensis*, R. Br., *Cassia corymbosa*, Lam., *Crataeva religiosa*, Forst., *Melaleuca Leucadendron*, Linn., *Poinciana regia*, Boj., *Quercus Edithae*, Skan, *Salix babylonica*, Linn., *Sterculia lanceolata*, Cav. and *Tutcheria spectabilis*, Dunn.

17. *Aleurites montana*, Wils. again flowered and produced seeds freely; *Aleurites Fordii*, Hemsl. flowered freely but produced only a small number of seeds.

18. *Southorn Playground, Wanchai.*—Sixty-four *Aleurites triloba*, Forst. were planted along the boundaries of the ground.

19. *Cheung Chau.*—Shade trees to the number of 823 were planted by sides of roads and paths in all parts of the island. The tree nursery was enlarged and restocked.

20. *Insect Pests.*—Pine Tree Caterpillars (*Dendrolimus punctatus*) appeared in many plantations, late in the year. They were most numerous in the Fan Ling and Kowloon plantations in June and July, when collection and destruction were commenced; over four tons of caterpillars were destroyed.

21. *Forest and Hill Fires.*—A total of 81 fires occurred during the year as against 58 in 1933. Serious damage was done to areas of wild trees and Pine plantations; four fires which occurred at Customs Pass, Tytam Tuk, Repulse Bay

and Tytam Valley destroyed 5,360 Pines of various sizes. Several days before the Ching Ming and Chung Yeung Festivals the usual warning notices were posted and handbills distributed, only one fire broke out on each of the days mentioned.

22. *Forest Guards Services.*—The total number of persons arrested for all classes of forestry offences by Forest Guards was 153; of these 149 were convicted and 4 discharged. The Police arrested 315 persons, of whom 298 were convicted. Twenty persons who were convicted of two or more offences were banished, the majority of them were men who subsist mainly on the proceeds of sale of stolen timber; the removal of a considerable number of such men from the Colony, during the past few years, has lessened the damage to Pine plantations on the Island, particularly in the Shaukiwan district.

23. *Protection of Plantations.*—The clearing and the repairing of all fire-barriers and forestry paths were carried out before the commencement of the dry season. Over 100 miles of paths and barriers were dealt with. One new combined forestry path and barrier, 4,000 feet in length, was constructed above the Kowloon Catchwater; an old barrier between Aberdeen and Little Hong Kong was widened from 10 to 20 feet.

24. *Undergrowth Clearing.*—In Hong Kong, Kowloon and New Territories, the total areas cleared in connection with anti-malarial measures were 2,972,253 square feet; other areas cleared for the purpose of surveys, formation of roads, reservoirs and catchments, and building and other developments amounted to 1,654,670 square feet.

25. *Preservation of Local Flora.*—Groups of *Sarcanthus teretifolius*, Lindl., a purple-flowered Orchid and *Iris speculatrix*, Hance, were lifted and replanted in Mount Collinson Prohibited Area.

26. *Trees Felled.*—Traffic requirements necessitated the removal of a large number of trees, of varying ages, from Nathan Road, Kowloon; a small number of the youngest were lifted and replanted elsewhere. The total number removed was 191, the majority having to be felled and destroyed. A number of the large Banians had shaded Nathan Road for over forty years. The species of trees removed were 1 *Bombax Malabaricum*, DC., 1 *Albizzia Lebbek*, Benth., 2 *Ficus infectoria*, Roxb., 9 *Poinciana regia*, Boj., 24 *Ficus retusa*, Linn., 35 *Aleurites triloba* and 119 *Crataeva religiosa*, Forst.

27. *Forestry Staff Quarters.*—Permanent quarters for a Senior Forester and permanent and temporary Foresters, built by the Public Works Department at Lai Chi Kok, were occupied early in the year.

Agriculture, etc.

28. *Fan Ling Experimental Garden.*—A Citrus plot was established in the old section of the garden; the young plants made rapid growth and two edible varieties produced fair crops of fruit at the end of the year. Further planting of Canadian Government Certified Seed Potatoes and foreign vegetables for demonstration purposes, were carried out during the year.

29. The annual Show of the New Territories Agricultural Association was held at Shek Wu Hui on January 6th and 7th. A general exhibit of foreign vegetables, grown in the Experimental Garden at Fan Ling, was staged on both days.

30. *Inspection of Nursery Stock and Vegetable Products.*—Sixteen consignments of *Narcissus Tazetta*, Linn., containing 124,800 bulbs were examined and passed for export to Britain, Canada, Holland, Honolulu and Japan. Fifty-four consignments of dried and fresh vegetable products, consigned to the Philippine Islands, and twelve consignments of miscellaneous plants and seeds, consigned to various countries, were inspected and certified. Sixteen consignments of Sugar Cane, containing 117,000 pieces were passed for export to Singapore.

Seed Collection.

31. Seeds of the following were collected for local use and for the purpose of exchange:—*Albizzia Lebbek*, Benth., *Atalantia Hindsii*, Oliv., *Aleurites Fordii*, Hemsl., *Aleurites montana*, Wils., *Aleurites triloba*, Forst., *Acacia confusa*, Merr., *Acacia pennata*, Willd., *Artocarpus hypargyraea*, Hance, *Artocarpus integrifolia*, Linn., *Adenanthera pavonina*, Linn., *Bauhinia variegata*, Linn., *Bauhinia glauca*, Wall., *Thuya orientalis*, Linn., *Cinnamomum Camphora*, Nees, *Casuarina equisetifolia*, Linn., *Cassia fistula*, Herbb. ex Oliver, *Cassia siamea*, Lam., *Cassia corymbosa*, Lam., *Cunninghamia sinensis*, R. Br., *Callistemon rigidus*, R. Br., *Callistemon lanceolatus*, Sweet, *Cupressus macrocarpa*, Hartw., *Castanopsis Lamontii*, Hance, *Enkianthus quinqueflorus*, Lour., *Camellia hongkongensis*, Seem., *Diospyros Tutcheri*, Dunn, *Garcinia oblongifolia*, Champ., *Taxodium heterophyllum*, Brongn., *Hibiscus tiliaceus*, Linn., *Iris speculatrix*, Hance, *Kateleeria Fortunei*, Carr., *Liquidambar formosana*, Hance, *Leucaena glauca*, Benth., *Lilium Brownii, var. Colchesteri*, *Melia Azederach*, Linn., *Melaleuca Leucadendron*, Linn., *Poinciana regia*, Boj., *Phœnix Rœbelinii*, O'Brien, *Quercus cornea*, Lour., *Quercus Edithae*, Skan, *Quercus Elizabethae*, Tutcher, *Quercus salicina*, Blume, *Quercus Harlandi*, Hance, *Quercus bambusaefolia*, Hance, *Rauwolfia chinensis*, Hemsl., *Sapium discolor*, Muell-Arg., *Sapium sebiferum*, Roxb., *Strychnos angustiflora*, Benth, *Sterculia lanceolata*, Cav., and *Tristania conferta*, Griff.

Exchange of Seeds, etc.

32. The Department is indebted to the following donors of seeds, plants, etc.:—The Director, the Botanic Garden, Dr. Sun Yat-sen's Memorial Park, Nanking; the Director, Royal Botanic Gardens, Department of Agriculture, Trinidad and Tobago, B.W.I.; the Deputy Director of Agriculture and Forests, Department of Agriculture, Forests and Fisheries, American Colony, Jerusalem; Professor Woon-yung Chun (Canton); Dr. G. A. C. Herklots and Professor W. Brown, University of Hong Kong; Mrs. P. C. Evans; Lt.-Commander Fothergill, R.N.; Messrs. J. T. Bagram and Owen Hughes and the Mow Fong Garden.

33. The following were the principal recipients:—Dr. H. C. Sampson (Kew); The Ministere de L'Agriculture, Cap D' Antibes, Alpes-Maritimes; Sir Oscar Warburg, O.B.E. (England); Mr. George Gotscheff, the Principal of the State Experimental Station for Flat Cultivation, Selo Lidjene, Bulgaria; Professor Woon-yung Chun (Canton); The Director, Department of Agriculture and Forests, Jerusalem, Palestine; Messrs. L. Gibbs (England); W. Dixson (Sydney); S. C. Harland of Cotton Research Station, Trinidad, B.W.I.; James M. Henry (Ling Nan University, Canton); Dr. G. A. C. Herklots; Mrs. R. E. Hoare and the Mow Fong Garden.

Revenue and Expenditure.

34. Statement of Revenue and Expenditure of the Department are given in Tables I, II and III.

Staff.

35. The Superintendent proceeded on leave on February 24th and returned and resumed duty on November 29th.

36. The Assistant Superintendent, Mr. G. B. Twemlow, was in charge of the Department during the Superintendent's absence.

H. GREEN,
Superintendent.

26th March, 1935.

Table I.

Comparative Statement of Expenditure for 1933 and 1934.

Expenditure.	1933	1934.
	$	$
Personal Emoluments	79,688.55	80,738.57
Other Charges.		
Brushwood Clearing	6,998.55	6,997.70
Conveyance Allowances	2,370.00	2,017.18
Expenses of Collections	193.59	198.85
Field Allowances to Foresters ...	588.93	652.67
Forestry	15,997.59	15,987.85
Forestry Reserve, Taipo Kau ...	3,994.17	3,985.45
Incidental Expenses	349.34	349.42
Library	299.68	299.91
Light	209.47	285.23
Maintenance of Gardens	9,942.92	10,973.21
Protection of Plantations	1,528.62	1,444.09
Transport	1,596.85	1,517.69
Uniform & Accoutrements	995.37	995.64
Upkeep of Car	1,008.60	959.68
Total Other Charges	46,073.68	46,664.57
Special Expenditure.		
Repairs to Herbarium Cabinets.	999.64	—
Total Botanical & Forestry Dept.	126,761.87	127,403.14

Table II.

Comparative Statement of Revenue, 1933 and 1934.

Revenue.	1933	1934.
	$	$
Timber Sales	4,052,83	1,994.69
Plant Sales	1,237.70	777.33
Loan of Plants	177.80	112.84
Forestry Licences	11,268.48	10,259.06
Forfeiture	15.00	218.50
Sale of Condemned Stores	16.99	7.16
Overpayments in Previous Years	5.19	—
Other Miscellaneous Receipts..	860.97	714.44
Total	17,634.96	14,084.02

Collected by District Officers.

Including $700 for Inspection of Nursery Stock as against $850 in 1933.

Table III.

Comparative Statement of Expenditure and Revenue for the Past Ten Years.

Year.	Personal Emoluments & Other Charges.	Special Expenditure.	Total Expenditure.	Total Revenue.
	$	$	$	$
1925.....	88,132.99	8,238.64	96,371.63	9,806.95
1926.....	87,757.80	2,230.21	89,988.01	10,798.95
1927.....	95,722.45	—	95,722.45	7,861.76
1928.....	99,178.99	—	99,178.99	8,849.35
1929.....	101,146.23	—	101,146.23	11,885.97
1930.....	120,565.39	3,809.67	124,375.06	12,376.46
1931.....	121,189.43	—	121,189.43	11,717.67
1932.....	122,041.57	—	122,041.57	17,028.99
1933.....	125,762.43	999.64	126,761.87	17,634.96
1934.....	127,403.14	—	127,403.14	14,084.02